ORDER NO. SD8107199304

1945

Service Manual

Stereo Integrated Amplifier

Original

SU-C04

[PA],[PE]

Areas

[PA] is available in for East PX.
[PE] is available in European Military.

Please use this manual together with the service manual for Model No. SU-C04 [EX, EK, XA, EL, EF, EH, EB] Order No. SD81061911C8.

CHANGES

■ REPLACEMENT PARTS LIST

Ref. No.		Change of Part No. SU-C04 (SD81061911C8) → SU-C04 [PA], [PE]		Part Name & Description	Per Set (Pcs.)		Remarks
CABINET and CHASSIS PARTS							
1	○	SYW521	SYW463	Panel, Front Ass'y	1		○
	K	SYW429					
10		SGP2750–1A [XA]	SGP2750–1B	Rear Panel	1		○
		SGP2750–2A [EX, EK, EF, EH, EB]					
		SGP2750–3A [XL]					
12	⚠	**QFC1207MA** [XL]	**RJA52Z**	AC Cord	1		
	⚠	**SJA88** [EF, EH, EB, EX]					
	⚠	**QFC1205M** [EK]					
	⚠	SJA111 [XA]					
13		SHR127 [EF, EH, EB, EX, XA]	SHR127	Bushing, AC Cord	1		
		SHR129 [EK]					
		SHR131 [XL]					
19	⚠	SJS9221 [XA]	SJS9221	AC Outlet	3		
		SGT24750 [EX]	SGT24790	Name Plate	1		
		SGT24770 [EK, EF, EH, EB]					
		SGT24790 [XA, XL]					
ACCESSORIES							
A1		SQF10819 [EX, EF, EH, EB]	SQF10825	Instructions Book	1		○
		SQF10821–1 [EK, XL]					
		SQF10823 [XA]					
A2	⚠	SJP5215 [XA]	Deletion	Plug Adapter, AC Power	0		
A3	⚠	SJP5213–1 [XA]	Deletion	Plug Adapter, AC Power	0		
A4	⚠	Addition	RJP120ZBS	Plug Adapter, AC Power	1		
PACKING PARTS							
P1		SGP3213 [EX, EK, XA, EH, EB]	SPG3213	Carton Box	1		
		SGP3211 [EF]					
		SGP3215 [XL]					
P2		SPS3227	SPS3227	Pad, Left	1		
		SPS3227–1 [XL]					
P3		SPS3229	SPS3229	Pad, Right	1		
		SPS3229–1 [XL]					

Technics

Panasonic Tokyo
Matsushita Electric Industrial Co., Ltd.
17-15,6-chome, Shinbashi, Minato-ku, Tokyo 105 Japan

Matsushita Electric Trading Co., Ltd.
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1945

ORDER NO. SD81061911C8

Service Manual

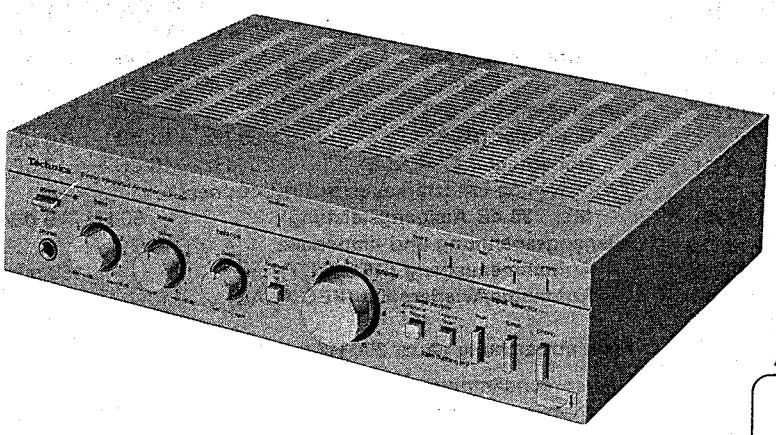
Stereo Integrated Amplifier

SU-C04

[EX],[EK],[XA],[XL],
[EF],[EH],[EB]

SU-C04 (K)

[EX],[EH],[XA]



***The cabinet and front panel are available in black color and silver types.**
*** The black type model is provided with (K) in the Service Manual.**

Areas

[EX] is available in Scandinavia.
[EK] is available in United Kingdom.
[XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
[XL] is available in Australia.
[EF] is available in France.
[EH] is available in Holland.
[EB] is available in Belgium.

English

Specifications

(Specifications are subject to change without notice for further improvement.)
Weights and dimensions shown are approximate.

(DIN 45 500)

■ AMPLIFIER SECTION

20 Hz~20 kHz continuous power output	
both channels driven	2 × 30W (8Ω)
40 Hz~16 kHz continuous power output	
both channels driven	2 × 30W (8Ω)
1 kHz continuous power output	
both channels driven	2 × 30W (8Ω)
Total harmonic distortion	
rated power at 20 Hz~20 kHz	0.007% (8Ω)
rated power at 40 Hz~16 kHz	0.007% (8Ω)
rated power at 1 kHz	0.003% (8Ω)
half power at 20 Hz~20 kHz	0.007% (8Ω)
half power at 1 kHz	0.003% (8Ω)
Intermodulation distortion	
rated power at 60 Hz: 7 kHz=4:1, SMPTE, 8Ω	0.007%
Power bandwidth	
both channels driven, −3 dB	5 Hz~50 kHz (8Ω, 0.02%)
Residual hum and noise	0.5 mV
Damping factor	60 (8Ω)
Input sensitivity and impedance	
PHONO	2.5 mV/47kΩ
TUNER, AUX	150 mV/22kΩ
TAPE 1 REC/PLAY	150 mV/22kΩ
PHONO maximum input voltage (1 kHz, RMS)	130 mV
S/N	
rated power	
PHONO	76 dB (IHF, A: 82 dB)
TUNER, AUX, TAPE	90 dB (IHF, A: 98 dB)
−26 dB power	
PHONO	66 dB
TUNER, AUX, TAPE	66 dB
50 mW power	
PHONO	64 dB
TUNER, AUX, TAPE	64 dB
Frequency response	
PHONO	RIAA standard curve ±0.8 dB (30 Hz~15 kHz)
TUNER, AUX, TAPE	5 Hz~100 kHz (−3 dB) 0 dB, −0.3 dB (20 Hz~20 kHz)
Tone controls	
BASS	50 Hz, +10 dB~ −10 dB
TREBLE	20 kHz, +10 dB~ −10 dB
Loudness control (volume at −30 dB)	50 Hz, +9 dB
Output voltage and impedance	
REC OUT	150 mV
REC/PLAY	30 mV/82kΩ
Channel balance, AUX 250 Hz~6,300 Hz	±1.0 dB
Channel separation, AUX 1 kHz	55 dB
Headphones output level and impedance	370 mV/330Ω
Load impedance	6Ω~16Ω

■ GENERAL

Power consumption	300W
Power supply	AC 50 Hz/60 Hz, 110V/120V/220V/240V
Dimensions (W×H×D)	297 × 74 × 230 mm (11-11/16" × 2-29/32" × 9-1/16")
Weight	4.5 kg (9.9 lb.)

Note:
Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

SU-C04

Deutsch

TECHNISCHE DATEN (Spezifikationen Können infolge von Verbesserungen ohne Ankündigung geändert werden.)

(DIN 45 500)

■ VERSTÄRKERTEIL

Dauerton-Ausgangsleistung bei 20 Hz ~ 20 kHz
beide Kanäle ausgesteuert 2 × 30W (8 Ω)
Dauerton-Ausgangsleistung bei 40 Hz ~ 16 kHz
beide Kanäle ausgesteuert 2 × 30W (8 Ω)
Dauerton-Ausgangsleistung bei 1 kHz
beide Kanäle ausgesteuert 2 × 30W (8 Ω)
Gesamtklirrfaktor
Nennleistung bei 20 Hz ~ 20 kHz 0,007% (8 Ω)
Nennleistung bei 40 Hz ~ 16 kHz 0,007% (8 Ω)
Nennleistung bei 1 kHz 0,003% (8 Ω)
halbe Nennleistung bei 20 Hz ~ 20 kHz 0,007% (8 Ω)
halbe Nennleistung bei 1 kHz 0,003% (8 Ω)
Intermodulationsfaktor
Nennleistung bei 60 Hz: 7 kHz = 4:1, nach SMPTE, 8 Ω
0,007%
Leistungsbandbreite
beide Kanäle ausgesteuert bei −3 dB
5 Hz ~ 50 kHz (8 Ω, 0,02%)
Restbrumm und Geräusch 0,5 mV
Dämpfungsfaktor 60 (8 Ω)
Eingangsempfindlichkeit und -impedanz
Phono 2,5 mV/47 kΩ
Tuner, Aux 150 mV/22 kΩ
Tape 1 Aufnahme/Wiedergabe (TAPE 1 REC/PLAY)
150 mV/22 kΩ
Maximale TA-Eingangsspannung (1 kHz, eff.) 130 mV
Geräuschabstand
Nennleistung
Phono 76 dB (nach IHF, A: 82 dB)
Tuner, Aux, Tape 90 dB (nach IHF, A: 98 dB)
−26 dB Leistung
Phono 66 dB
Tuner, Aux, Tape 66 dB
50 mW Leistung
Phono 64 dB
Tuner, Aux, Tape 64 dB

Frequenzgang
Phono RIAA-Standardkurve
±0,8 dB (30 Hz ~ 15 kHz)
Tuner, Aux, Tape 5 Hz ~ 100 kHz(−3 dB)
0 dB, −0,3 dB (20 Hz ~ 20 kHz)
Klangregler
Baßregler (BASS) 50 Hz, +10 dB ~ −10 dB
Höhenregler (TREBLE) 20 kHz, +10 dB ~ −10 dB
Gehörrichtige Lautstärkekorrektur (Loudness)
(bei −30 dB Ausgangsleistung) 50 Hz, +9 dB
Ausgangsspannung und -impedanz
Aufnahmeausgang (REC OUT) 150 mV
Aufnahme/Wiedergabe (REC/PLAY)
30 mV/82 kΩ
Kanalabweichung (Aux, 250 Hz ~ 6300 Hz) ±1,0 dB
Übersprechdämpfung (Aux, 1 kHz) 55 dB
Kopfhörerpegel und -impedanz 370 mV/330 Ω
Lautsprecherimpedanz 6 Ω ~ 16 Ω

■ ALLGEMEINE DATEN

Leistungsaufnahme 300 W
Netzspannung
Wechselstrom 50 Hz/60 Hz, 110V/120V/220V/240V
Abmessungen (B×H×T) 297 × 74 × 230 mm
Gewicht 4,5 kg

Bemerkung:
Der Gesamtklirrfaktor wurde mit einem digitalen Rauschspektrometer (Anlage H.P. 3045) gemessen.

Français

CARACTERSTIQUES (Sujet á changement sans préaris.)

(DIN 45 500)

■ SECTION AMPLIFICATEUR

Puissance de sortie continue de 20 Hz~20 kHz,
les deux canaux en circuit 2× 30W (8Ω)

Puissance de sortie continue de 40 Hz~16 kHz,
les deux canaux en circuit 2× 30W (8Ω)

Puissance de sortie continue à 1 kHz
les deux canaux en circuit 2× 30W (8Ω)

Distorsion harmonique totale
à puissance nominale (20 Hz~20 kHz) 0,007% (8Ω)

à puissance nominale (40 Hz~16 kHz) 0,007% (8Ω)

à puissance nominale (1 kHz) 0,003% (8Ω)

à demi-puissance (20 Hz~20 kHz) 0,007% (8Ω)
à demi-puissance (1 kHz) 0,003% (8Ω)
Distorsion d'intermodulation
à puissance nominale à 60 Hz: 7 kHz=4:1, SMPTE, 8Ω
0,007%
Réponse de fréquences
les deux canaux en circuit, −3 dB
5 Hz~50 kHz (8Ω, 0,02%)
Bruit et ronflement résiduels 0,5 mV
Coefficient d'amortissement 60 (8Ω)
Sensibilité et impédance d'entrée
PHONO 2,5 mV/47kΩ
SYNTONISATEUR, AUX (TUNER, AUX) 150 mV/22kΩ
BANDE 1, ENREGISTREMENT/LECTURE
(TAPE 1 REC/PLAY) 150 mV/22kΩ

PHONO (tension d'entrée maximum, 1 kHz RMS)	130 mV
Signal/Bruit	
à puissance nominale	
PHONO	76 dB (IHF, A: 82 dB)
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	90 dB (IHF, A: 98 dB)
puissance de −26 dB	
PHONO	66 dB
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	66 dB
puissance de 50 mW	
PHONO	64 dB
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	64 dB
Réponse de fréquence	
PHONO	Courbe nominale RIAA ±0,8 dB (30 Hz~15 kHz)
SYNTONISATEUR, AUX, BANDE (TUNER, AUX, TAPE)	5 Hz~100 kHz (−3 dB) 0 dB, −0,3 dB (20 Hz~20 kHz)
Réglage de la tonalité	
BASSES (BASS)	50 Hz, +10 dB~ −10 dB
AIGUS (TREBLE)	20 kHz, +10 dB~ −10 dB
Compensateur physiologique (volume à −30 dB)	50 Hz, +9 dB
Tension de sortie et impédance	
SORTIE ENREGISTREMENT (REC OUT)	150 mV
ENREGISTREMENT/LECTURE(REC/PLAY)	30 mV/82kΩ
Equilibrage des canaux, AUX 250 Hz~6 300 Hz	±1,0 dB
Séparation des canaux, AUX 1 kHz	55 dB
Niveau de sortie des casques et impédance	370 mV/330Ω
Impédance de charge	6Ω~16Ω

■ DIVERS

Consommation	300W
Alimentation	CA 50 Hz/60 Hz, 110V/120V/220V/240V
Dimensions (L× H× Pr)	297× 74× 230 mm
Poids	4,5 kg

Remarque:
On mesure la distorsion harmonique totale au moyen d'un analyseur de spectre digital (Système H.P. 3045).

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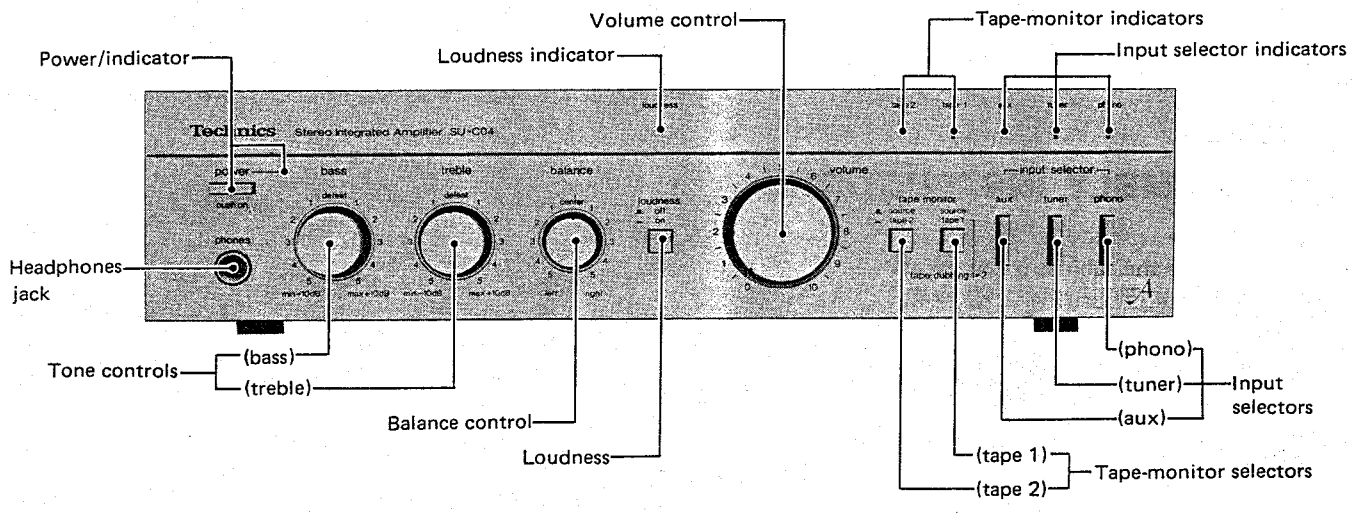
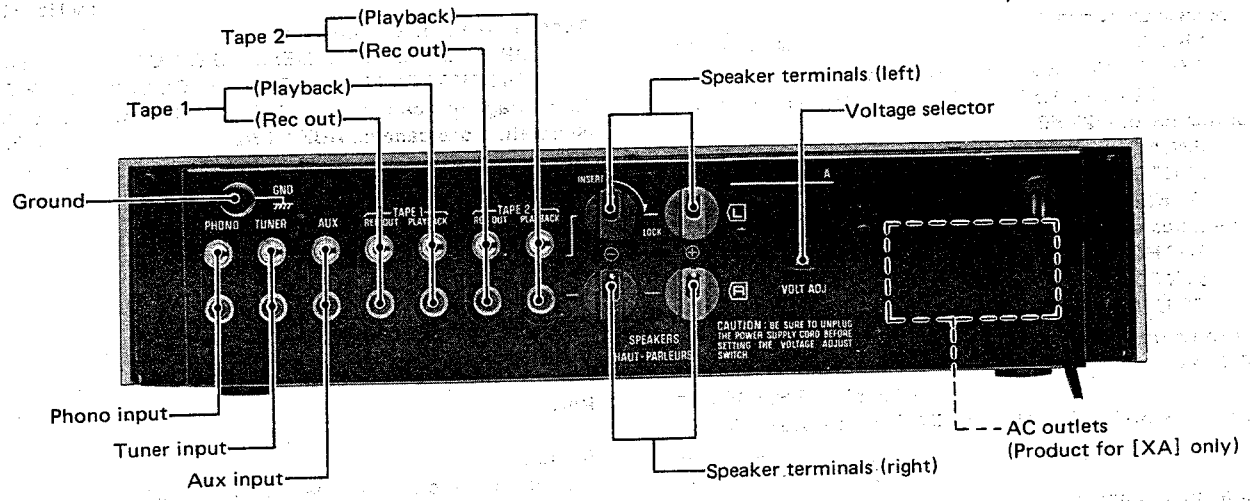
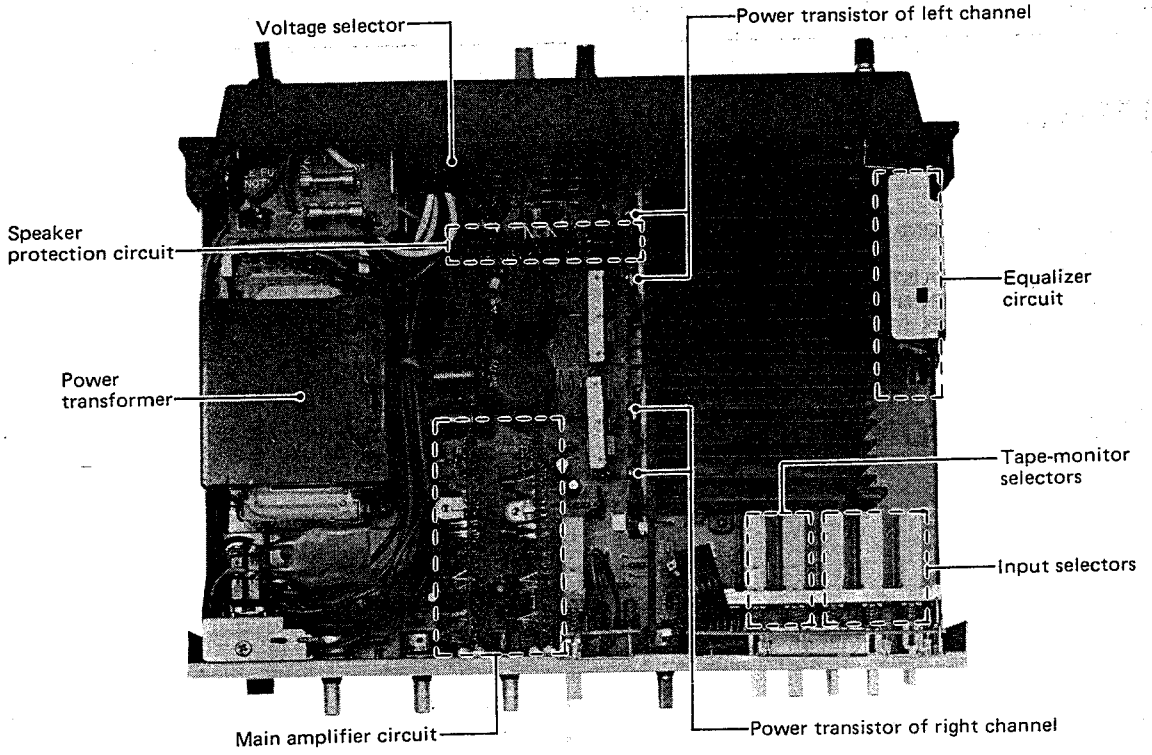
■ LOCATION OF CONTROLS







■ DISASSEMBLY INSTRUCTIONS

- **How to remove the cabinet (front panel)**
  1. Remove the 4 knobs (Fig. 1: ❶ ~ ❹).
  2. Remove the 4 setscrews (Fig. 1: ❺ ~ ❽) of the cabinet.
  3. Pull the cabinet toward you and lift it up, holding it by the right and left edges, in the direction of arrow Ⓐ in Fig. 1.

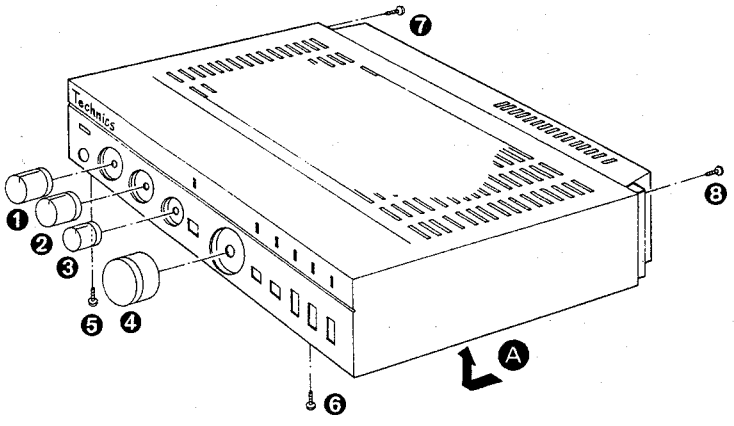


Fig. 1

- **How to remove the bottom board**
  Remove the 4 setscrews (Fig. 2: ⑨ ~ ⑫) of the bottom board.

- **How to remove the power transistor**
  1. Unsolder the power transistor as shown in Fig. 3.
  2. Remove the 4 setscrews (Fig. 4: ⑬ ~ ⑯) of the heat-sink and the shielding plate setscrew (Fig. 4: ⑰) of the equalizer circuit printed board.
  3. Pull out the speaker protection circuit printed board.
  4. Lift the heat-sink along with the power transistor.
  5. To install the power transistor, apply heat diffuser (silicone compound, etc.) on both sides of mica plate and attach it to the heat-sink with setscrews.
     And then, secure the heat-sink on the chassis and solder the power transistor.

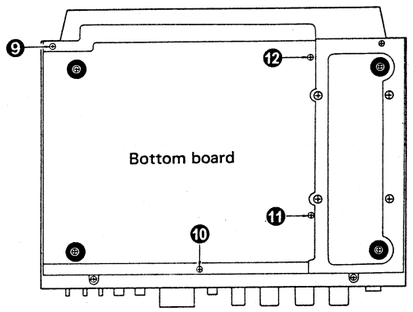


Fig. 2

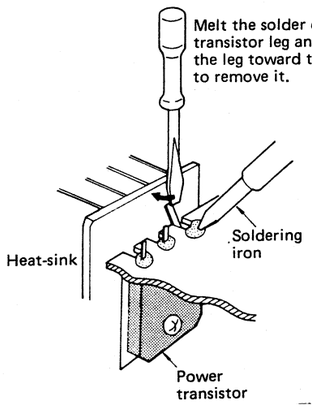

Melt the solder of the power transistor leg and shift down the leg toward the heat sink to remove it.
Soldering iron
Heat-sink
Power transistor

Fig. 3

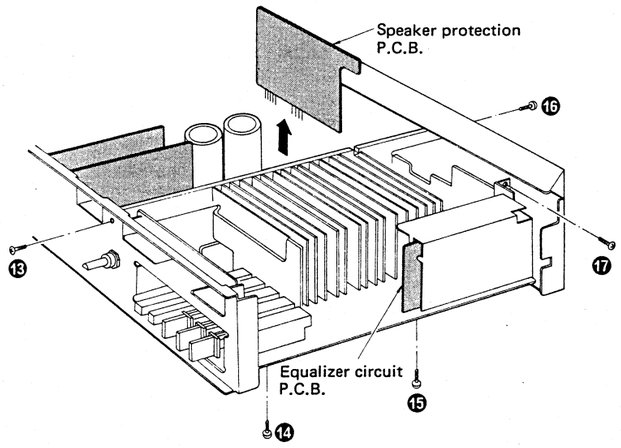
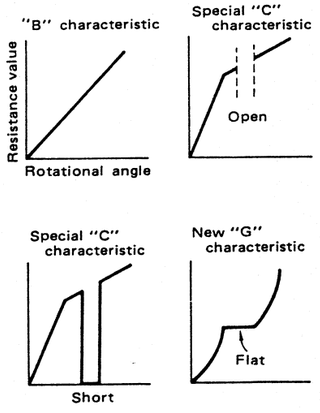


Fig. 4

■ VARIABLE RESISTORS

- **Variable resistors used in this unit**
  The sound volume VR and circuit adjusting semifixed volume VR are using "B" characteristic of which resistance varies in proportion to rotational angle. Treble volume VR uses special "C" characteristic of which both ends of volume are open at the middle. Bass volume VR uses special "C" characteristic of which both ends of volume are short-circuited at the middle.
  Balance volume VR uses "G" characteristic of which the resistance value is constant at the middle.



■ MEASUREMENTS AND ADJUSTMENTS ——— English

- **Setting of controls and instruments to be used.**
  1. Sound volume . . . . . 0 (minimum)
  2. DC voltmeter (capable to measure 5mV)

Adjustment	DC Voltmeter Connections	Adjusting Point	Adjustment Procedure
ICQ	L channel Between TP1 and TP2 (minus probe)	VR301	* Adjust VR301 (L ch.) and VR302 (R ch.) so that the voltage is 2mV, about 1 min. after power supply ON.
	R channel Between TP3 and TP4 (minus probe)	VR302	

■ MESSUNGEN UND JUSTIERUNGEN ——— Deutsch

- **Einstellungen und verwendete instrumente.**
  1. Lautsärke . . . . . 0 (Minimum)
  2. Gleichstrom-Voltmeter (zum Messen von 5mV geeignent)

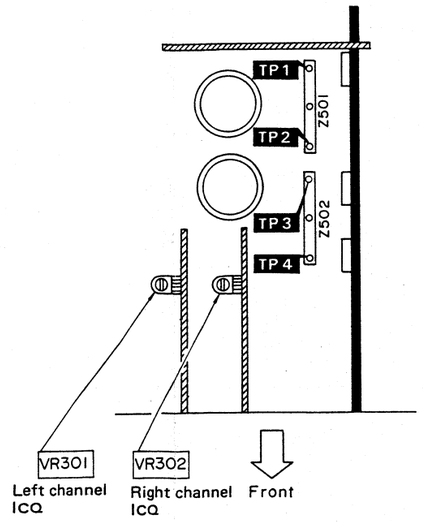
Einstellungen	Gleichstrom-Voltmeter bindungen	Einstellungspunkte	Einstellungsvorgang
ICQ	L- Kanal Zwischen TP1 und TP2 (Minustest)	VR301	* VR301 (L-Kanal) und VR302 (R-Kanal) so justieren, daß die spannung, ca. 1 Minuten nach dem Einschalten der stromzuführ, 2mV beträgt.
	R-Kanal Zwischen TP3 und TP4 (Minustest)	VR302	

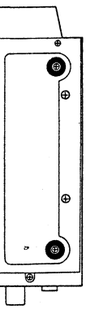
■ MESURAGES ET RÉGLAGES ——— Français

- **Réglages et appareils utilisés**
  1. Volume sonore . . . . . 0 (minimum)
  2. Voltmètre à C.C. (capable de mesurer 5mV)

Réglages	Connexions du voltmetre C.C.	Point de réglage	Procédé de réglage
ICQ	Canal de gauche Entre TP1 et TP2 (sonde au moins)	VR301	* Régler VR301 (canal de gauche) et VR302 (canal de droite) de façon à ce gue la tension soit de 2mV, environ 1 minute après la mise en marche de la tension d'alimentation.
	Canal de droite Entre TP3 et TP4 (sonde au moins)	VR302	

- **Adjustment points**





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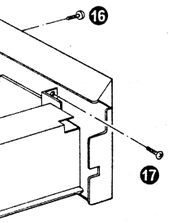


cial "C"
haracteristic

Open

"G"
aracteristic

Flat

■ MEASUREMENTS AND ADJUSTMENTS ——— English

• Setting of controls and instruments to be used.
1. Sound volume . . . . . 0 (minimum)
2. DC voltmeter (capable to measure 5mV)

Adjustment	DC Voltmeter Connections	Adjusting Point	Adjustment Procedure
ICQ	L channel Between TP1 and TP2 (minus probe)	VR301	* Adjust VR301 (L ch.) and VR302 (R ch.) so that the voltage is 2mV, about 1 min. after power supply ON.
	R channel Between TP3 and TP4 (minus probe)	VR302	

■ MESSUNGEN UND JUSTIERUNGEN ——— Deutsch

• Einstellungen und verwendete instrumente.
1. Lautsärke . . . . . 0 (Minimum)
2. Gleichstrom-Voltmeter (zum Messen von 5mV geeignent)

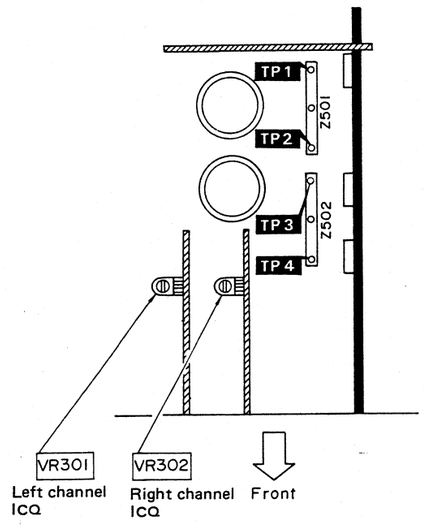
Einstellungen	Gleichstrom-Voltmeter bindungen	Einstellungspunkte	Einstellungsvorgang
ICQ	L- Kanal Zwischen TP1 und TP2 (Minustest)	VR301	* VR301 (L-Kanal) und VR302 (R-Kanal) so justieren, daß die spannung, ca. 1 Minuten nach dem Einschalten der stromzuführ, 2mV beträgt.
	R-Kanal Zwischen TP3 und TP4 (Minustest)	VR302	

■ MESURAGES ET RÉGLAGES ——— Français

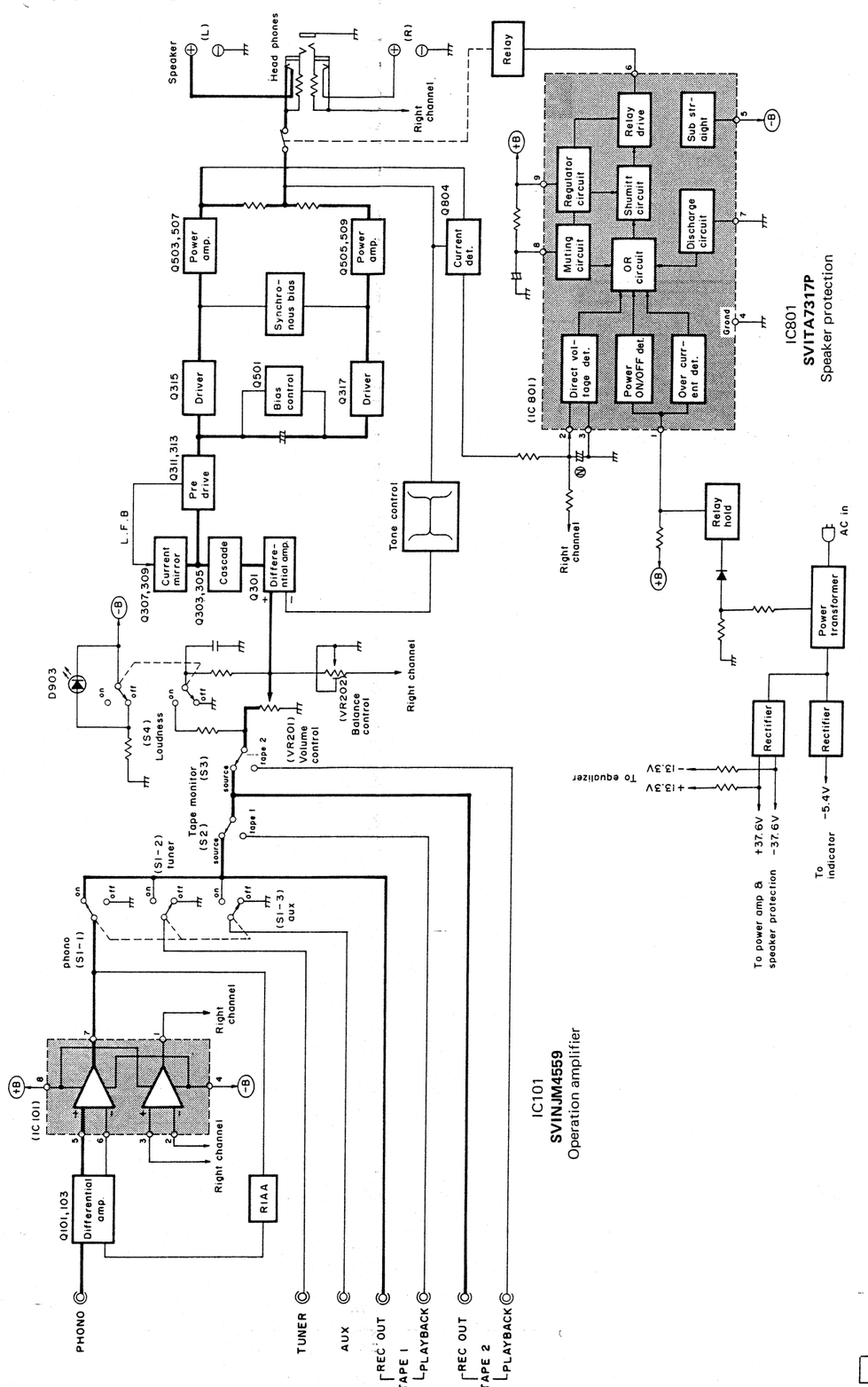
• Réglages et appareils utilisés
1. Volume sonore . . . . . 0 (minimum)
2. Voltmètre à C.C. (capable de mesurer 5mV)

Réglages	Connexions du voltmetre C.C.	Point de réglage	Procédé de réglage
ICQ	Canal de gauche Entre TP1 et TP2 (sonde au moins)	VR301	* Régler VR301 (canal de gauche) et VR302 (canal de droite) de façon à ce gue la tension soit de 2mV, environ 1 minute après la mise en marche de la tension d'alimentation.
	Canal de droite Entre TP3 et TP4 (sonde au moins)	VR302	

• Adjustment points

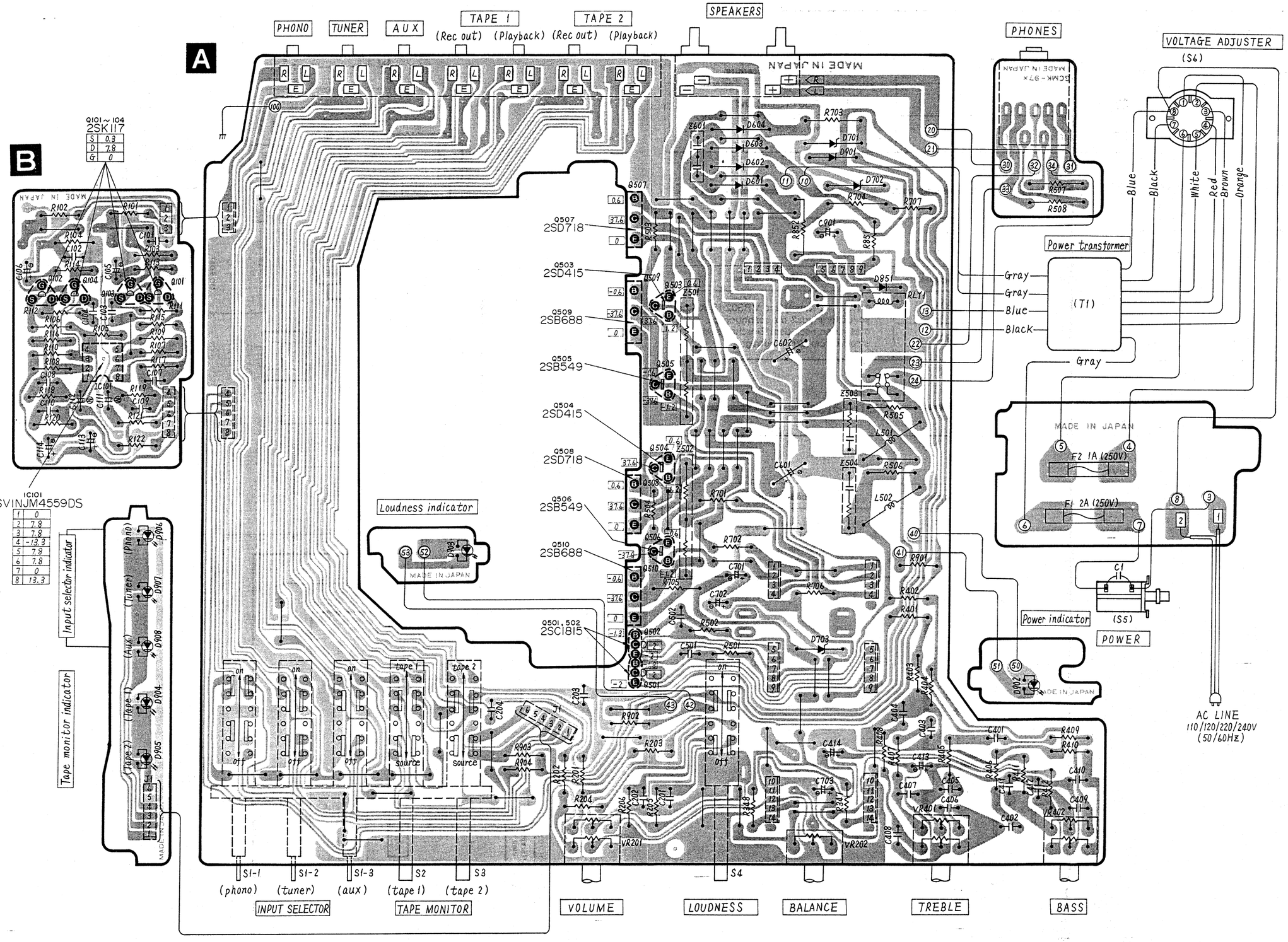


■ BLOCK DIAGRAM

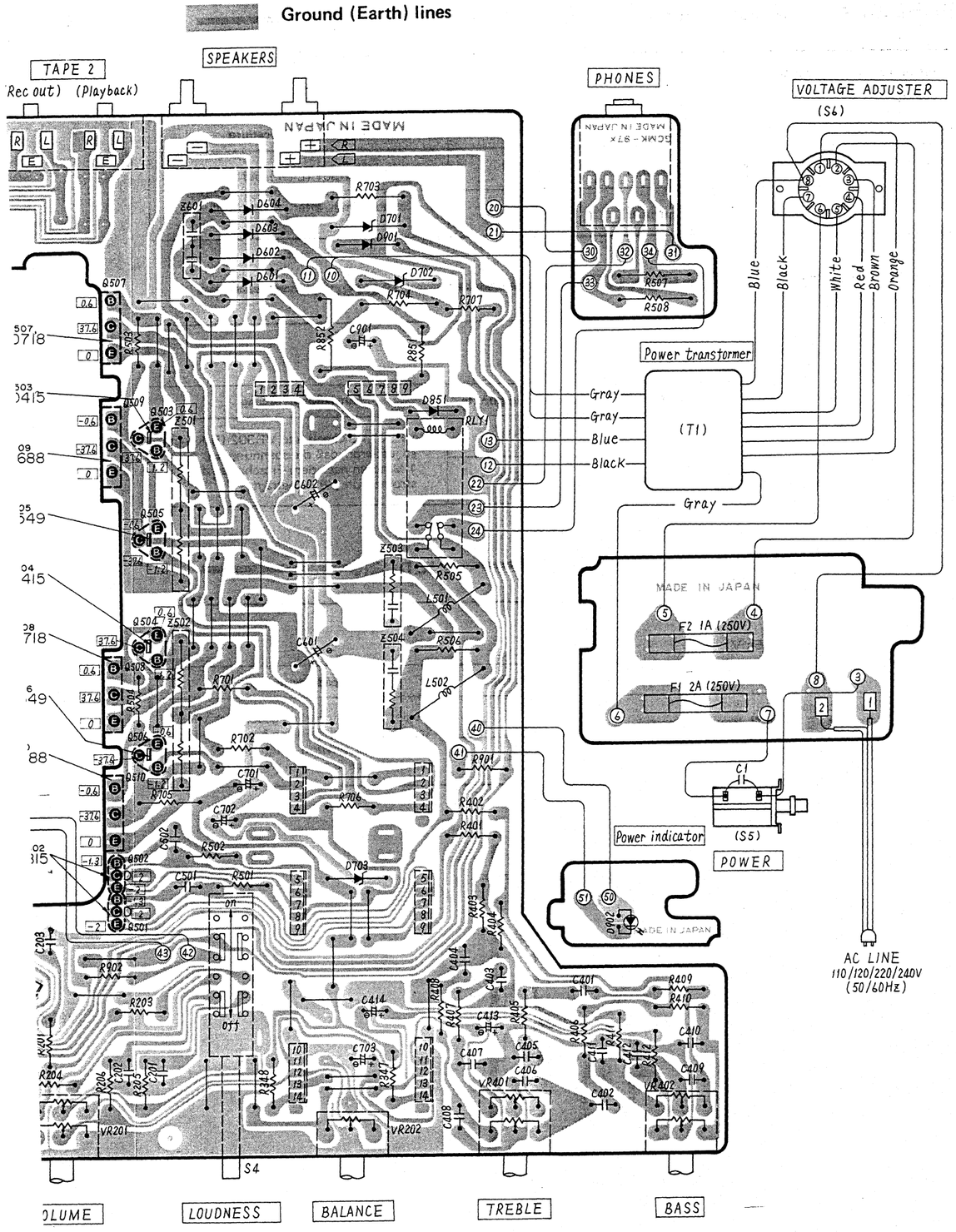


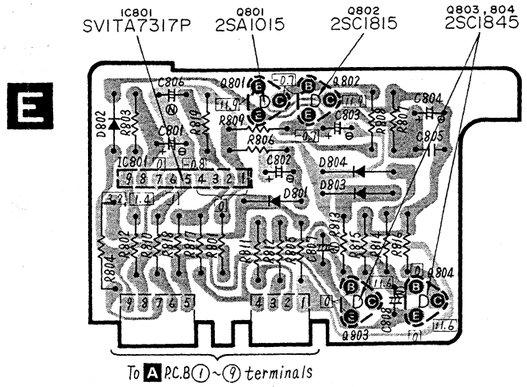
■ CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM

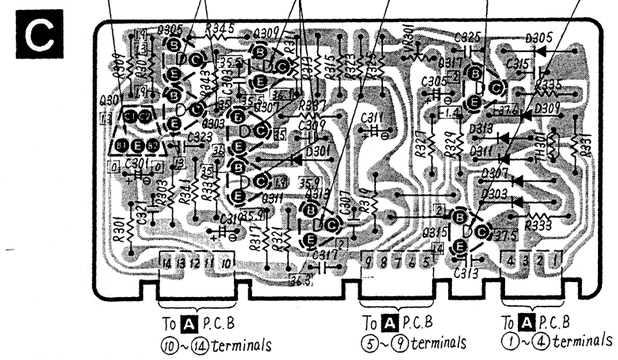
Ground (Earth) lines

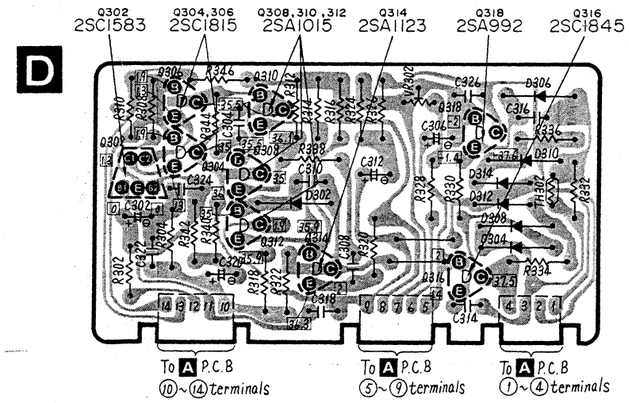


Ground (Earth) lines

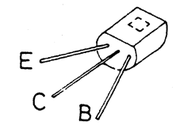
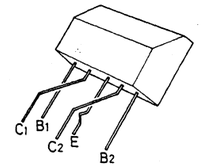
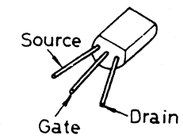
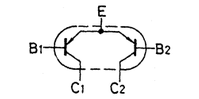
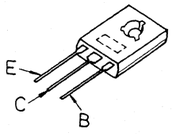
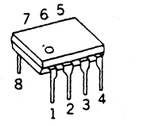
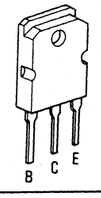
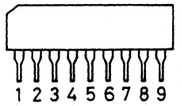


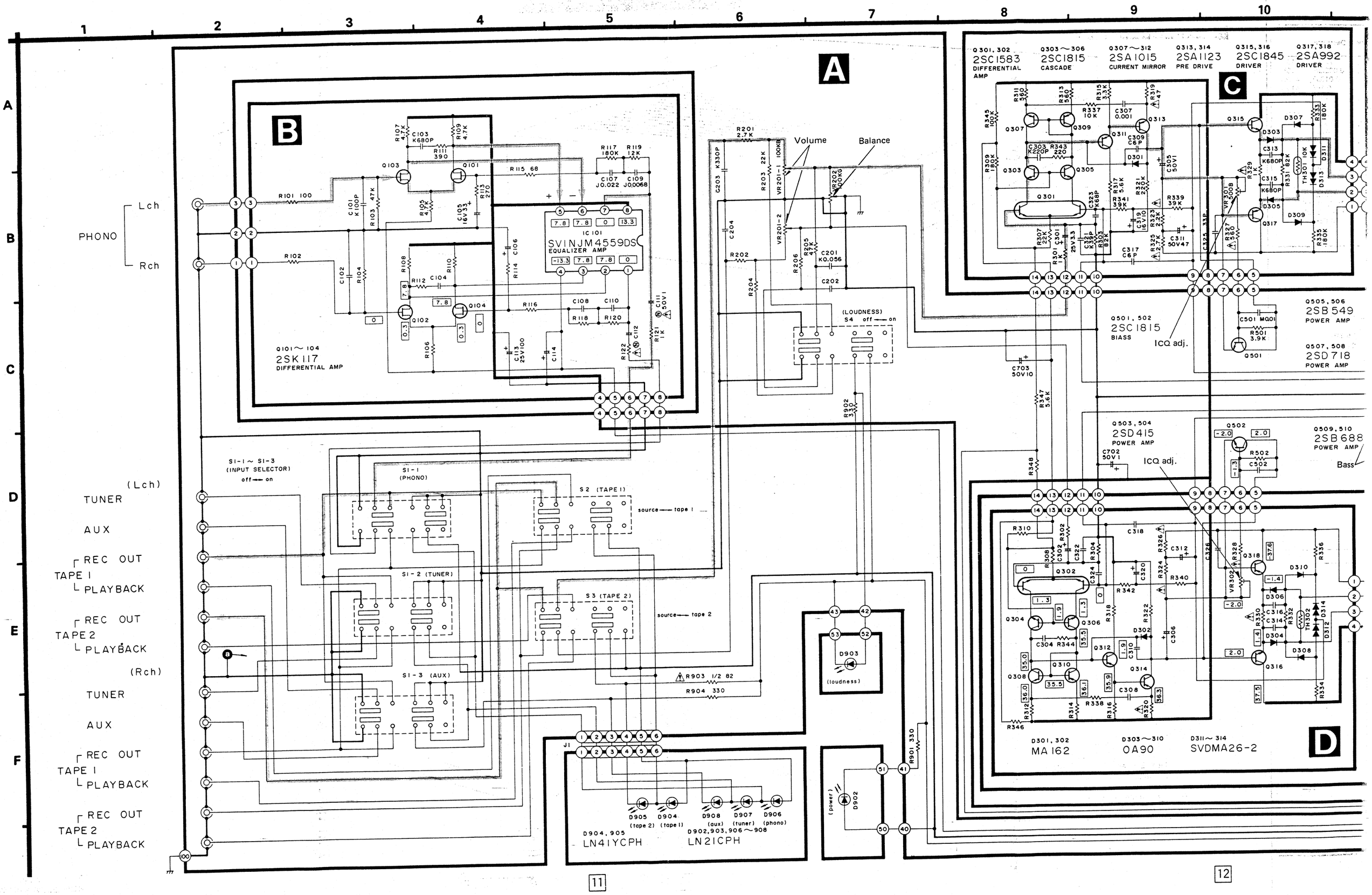


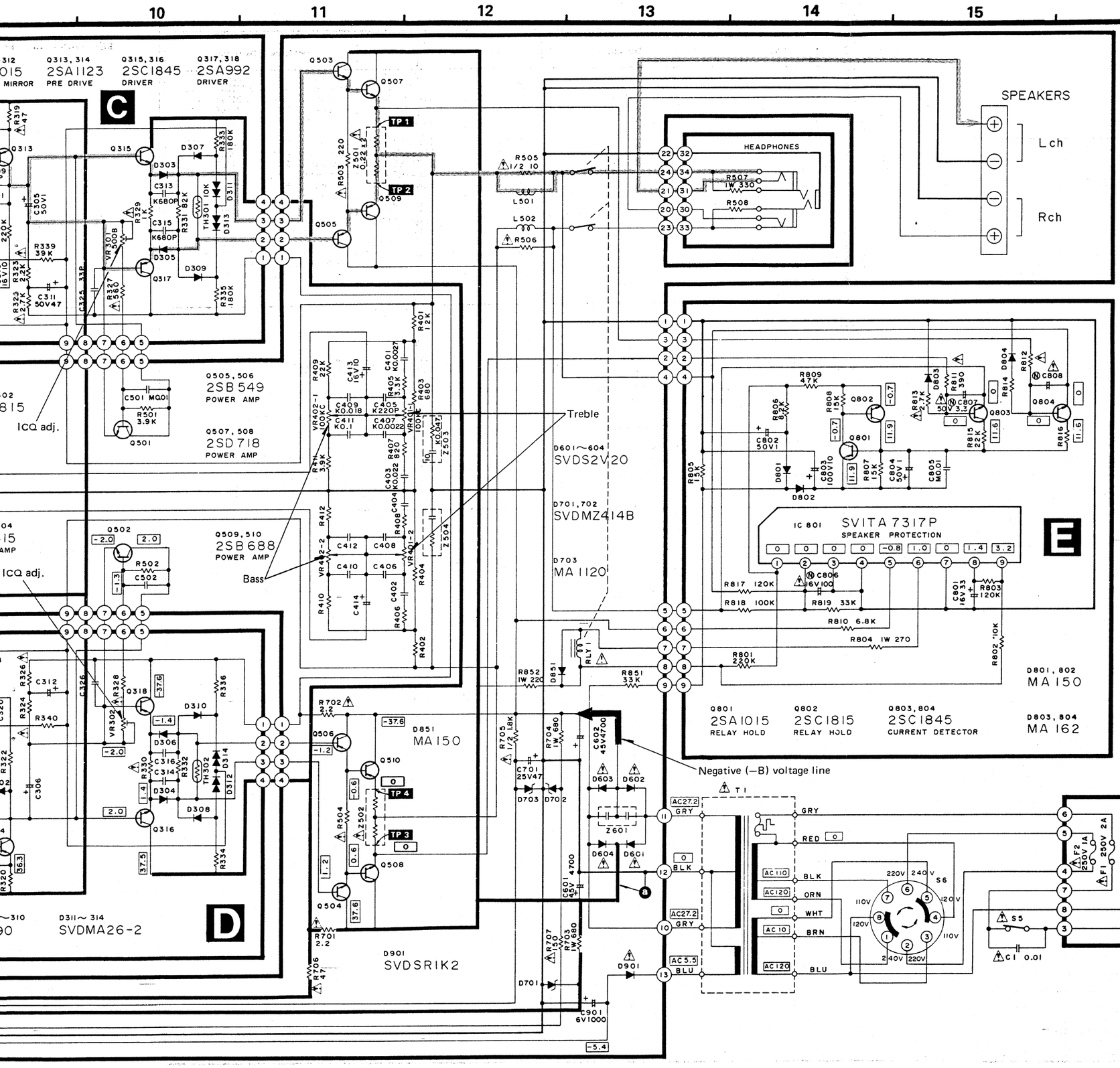




- **Terminal guide of transistors and IC's**

2SA992, 2SA1015, 2SA1123, 2SA1815, 2SC1845	2SC1583
	
2SK117	
	
2SB549, 2SD415	SVINJM4559
	
2SB688, 2SD718	SVITA7317P
	


A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10
PHONO
Lch
Rch
B
IC101
SVINJM4559DS
EQUALIZER AMP
Q101~104
2SK117
DIFFERENTIAL AMP
A
Volume
Balance
(LOUDNESS)
S4 off — on
C
Q301, 302
2SC1583
DIFFERENTIAL AMP
Q303~306
2SC1815
CASCADE
Q307~312
2SA1015
CURRENT MIRROR
Q313, 314
2SA1123
PRE DRIVE
Q315, 316
2SC1845
DRIVER
Q317, 318
2SA992
DRIVER
Q501, 502
2SC1815
BIASS
ICQ adj.
Q505, 506
2SB549
POWER AMP
Q507, 508
2SD718
POWER AMP
Q503, 504
2SD415
POWER AMP
Q509, 510
2SB688
POWER AMP
Bass
S1-1~S1-3
(INPUT SELECTOR)
off — on
S1-1
(PHONO)
S2 (TAPE 1)
source — tape 1
S1-2 (TUNER)
S3 (TAPE 2)
source — tape 2
S1-3 (AUX)
(Lch)
TUNER
AUX
REC OUT
TAPE 1
PLAYBACK
REC OUT
TAPE 2
PLAYBACK
(Rch)
TUNER
AUX
REC OUT
TAPE 1
PLAYBACK
REC OUT
TAPE 2
PLAYBACK
D
(loudness)
(power)
D902
D903
J1
D905 (tape 2)
D904 (tape 1)
D908 (aux)
D907 (tuner)
D906 (phono)
D904, 905
LN41YCPH
D902, 903, 906~908
LN21CPH
D301, 302
MA162
D303~310
0A90
D311~314
SVDMA26-2
D
11
12



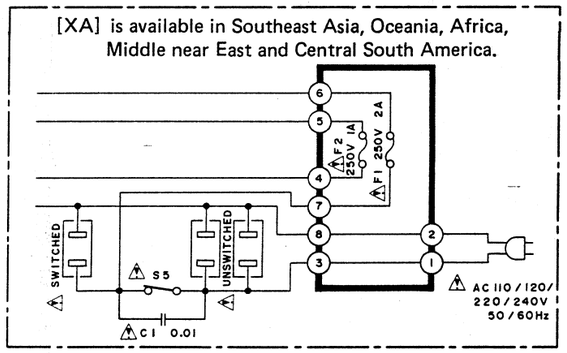
SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

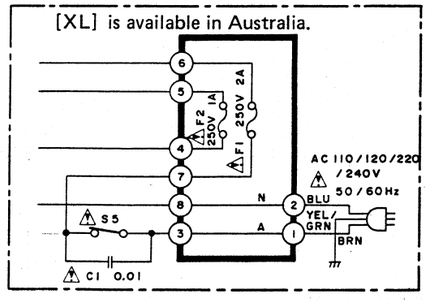
Notes:

1. **S1-1 ~ S1-3:** Input selector switch in **"phono"** position.
   S1-1 – phono, S1-2 – tuner, S1-3 – aux
2. **S2:** Tape 1 monitor switch in **"source"** position.
   source ⟷ tape 1/tape dubbing 1 ▶ 2
3. **S3:** Tape 2 monitor switch in **"source"** position.
   source ⟷ tape 2
4. **S4:** Loudness switch in **"off"** position.
5. **S5:** Power switch in **"on"** position.
6. **S6:** Voltage selector switch in **"120V"** position.
   120V ⟷ 110V ⟷ 220V ⟷ 240V
7. ▭ Indicated voltage values are the standard values for the DC electronic circuit tester (high impedance) with the chassis taken as standard.
   Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
8. ⟹ Phono signal lines of left channel.
   ▬ Positive (+B) voltage lines.
9. Important safety notice:
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

• Power source circuit for [XA] area only



• Power source circuit for [XL] area only



■ REPLACEMENT PARTS LIST ·····Electric Parts

Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Ref. No.		Part No.	Part Name & Desctiption
INTEGRATED CIRCUITS			
IC101		SVINJM4559DD	IC, Equalizer Amplifier
IC801		SVITA7317P	IC, Speakers Protection
TRANSISTORS			
Q101 ~ 104		2SK117–GR	Transistor, Equalizer Differential Amplifier [FET]
Q301, 302		2SC1583–G	Transistor, Differential Amplifier
Q303 ~ 306 802		2SC1815–Y	Transistor, Cascade and Relay Hold
Q307 ~ 312 801		2SA1015–Y	Transistor, Current Mirror and Relay Hold
Q313, 314		2SA1123–R	Transistor, Pre Drive
Q315, 316		2SC1845	Transistor, Driver } Use pair ranks
Q317, 318		2SA992	Transistor, Driver }
Q501, 502		2SC1815–Y	Transistor, Constant Current
Q503, 504		2SD415–Q	Transistor, Power Amplifier } Use pair ranks
Q505, 506		2SB549–Q	Transistor, Power Amplifier } P, Q, or R
Q507, 508		2SD718–O	Transistor, Power Amplifier } Use pair ranks
Q509, 510		2SB688–O	Transistor, Power Amplifier } R or O
Q803, 804		2SC1845	Transistor, Current Detector
DIODES			
D301, 302 803, 804		**MA162A**	Diode, Detector
D303 ~ 310		**20A90**	Diode, Synchronous Bias
D311 ~ 314		**MA27A–2**	Diode, Current Limiter
D601 ~ 604	⚠	SVDS2V20	Diode, Rectifier
D701, 702		**SVDMZ414**	Diode, 14V Zener
D703		**RVDRD12FB**	Diode, 12V Zener
D801, 802		**MA162A**	Diode, Bias
D851		**MA162A**	Diode, Detector
D901	⚠	**SVDSR1K2**	Diode, Rectifier
D902, 903 906 ~ 908		LN21CPH	Light Emitting Diode, Power, Loudness and Input Indicator
D904, 905		LN41YCPH	Light Emitting Diode, Tape 1, 2 Indicator
COILS			
L501, 502		SLQY15G–30	Coil, Choke
TRANSFORMER			
T1	⚠	SLT5M163–W	Transformer, Power Source
VARIABLE RESISTORS			
VR201		EWJGGA066B15	Volume Control, 100kΩ (B)
VR202		EWHHMA531G15	Balance Control, 100kΩ (G)
VR301, 302		**EVNM0AA00B52**	DC Balance Adjustment, 500Ω (B)
VR401		EWJFC0066C15	Treble Control, 100kΩ (C)
VR402		EWJFCY066530	Bass Control, 100kΩ (C)
COMPONENT COMBINATIONS			
Z501, 502	⚠	ERF3GBKR22N	Component Combination, 0.22Ω x 2
Z503, 504		ECQJ0517	Component Combination, 10Ω x 0.047μF
Z601		SXRFS203ZSM	Component Combination, 0.01μF x 2
SWITCHES			
S1 ~ 3		SSH535	Switch, Input Selector and Tape Monitor
S4		SSH1007	Switch, Loudness
S5	⚠	ESB90619S	Switch, Power
S6	⚠	ESE37200	Switch, Voltage Adjuster
RELAY			
RLY1	⚠	SSY91	Relay, Speaker Protection
THERMISTORS			
TH301, 302		ERTD2FHL103S	Thermistor, Thermal Compensation, 10kΩ
FUSES			
F1	⚠	XBA2C20TRO	Fuse, T 2.0A (250V)
F2	⚠	XBA2C10TRO	Fuse, T 1.0A (250V)
RESISTORS			
R101, 102		**ERD25FJ101**	Carbon, 1/4W, 100Ω, ±5%
R103, 104		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ±5%
R105, 106		**ERD25FJ472**	Carbon, 1/4W, 4.7kΩ, ±5%
R107, 108		**ERD25FJ472**	Carbon, 1/4W, 4.7kΩ, ±5%
R109, 110		**ERD25FJ472**	Carbon, 1/4W, 4.7kΩ, ±5%

Ref. No.		Part No.	Part Name & Description
R111, 112		**ERD25FJ391**	Carbon, 1/4W, 390Ω, ±5%
R113, 114		**ERD25FJ271**	Carbon, 1/4W, 270Ω, ±5%
R115, 116		**ERD25FJ680**	Carbon, 1/4W, 68Ω, ±5%
R117, 118		**ERD25TJ184**	Carbon, 1/4W, 180kΩ, ±5%
R119, 120		**ERD25TJ123**	Carbon, 1/4W, 12kΩ, ±5%
R121, 122		**ERD25FJ102**	Carbon, 1/4W, 1kΩ, ±5%
R201, 202		**ERD25FJ272**	Carbon, 1/4W, 2.7kΩ, ±5%
R203, 204		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ±5%
R205, 206		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ±5%
R301, 302		**ERD25FJ102**	Carbon, 1/4W, 1kΩ, ±5%
R303, 304		**ERD25TJ823**	Carbon, 1/4W, 82kΩ, ±5%
R307, 308		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ±5%
R309, 310		**ERD25TJ184**	Carbon, 1/4W, 180kΩ, ±5%
R311, 312		**ERD25FJ561**	Carbon, 1/4W, 560Ω, ±5%
R313, 314		**ERD25FJ561**	Carbon, 1/4W, 560Ω, ±5%
R315, 316		**ERD25FJ332**	Carbon, 1/4W, 3.3kΩ, ±5%
R317, 318		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ±5%
R319, 320	⚠	**ERD25FJ470**	Carbon, 1/4W, 47Ω, ±5%
R321, 322		**ERD25TJ224**	Carbon, 1/4W, 220kΩ, ±5%
R323, 324	⚠	**ERD25FJ222**	Carbon, 1/4W, 2.2kΩ, ±5%
R325, 326	⚠	**ERD25FJ272**	Carbon, 1/4W, 2.7kΩ, ±5%
R327, 328	⚠	**ERD25FJ561**	Carbon, 1/4W, 560Ω, ±5%
R329, 330	⚠	**ERD25FJ102**	Carbon, 1/4W, 1kΩ, ±5%
R331, 332		**ERD25TJ823**	Carbon, 1/4W, 82kΩ, ±5%
R333, 334		**ERD25TJ184**	Carbon, 1/4W, 180kΩ, ±5%
R335, 336		**ERD25TJ184**	Carbon, 1/4W, 180kΩ, ±5%
R337, 338		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ±5%
R339, 340		**ERD25TJ393**	Carbon, 1/4W, 39kΩ, ±5%
R341, 342		**ERD25TJ393**	Carbon, 1/4W, 39kΩ, ±5%
R343, 344		**ERD25FJ221**	Carbon, 1/4W, 220Ω, ±5%
R345, 346		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ±5%
R347, 348		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ±5%
R401, 402		**ERD25TJ123**	Carbon, 1/4W, 12kΩ, ±5%
R403, 404		**ERD25FJ681**	Carbon, 1/4W, 680Ω, ±5%
R405, 406		**ERD25FJ332**	Carbon, 1/4W, 3.3kΩ, ±5%
R407, 408		**ERD25FJ821**	Carbon, 1/4W, 820Ω, ±5%
R409, 410		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ±5%
R411, 412		**ERD25FJ392**	Carbon, 1/4W, 3.9kΩ, ±5%
R501, 502		**ERD25FJ392**	Carbon, 1/4W, 3.9kΩ, ±5%
R503, 504	⚠	**ERD25FJ221**	Carbon, 1/4W, 220Ω, ±5%
R505, 506	⚠	**ERD50FJ100**	Carbon, 1/2W, 10Ω, ±5%
R507, 508		**ERG1ANJ331**	Metal Oxida, 1W, 330Ω, ±5%
R701, 702	⚠	**ERD25FJ2R2**	Carbon, 1/4W, 2.2Ω, ±5%
R703, 704		**ERG1ANJ681**	Metal Oxida, 1W, 680Ω, ±5%
R705	⚠	**ERD50FJ182**	Carbon, 1/2W, 1.8kΩ, ±5%
R706	⚠	**ERD25FJ470**	Carbon, 1/4W, 47Ω, ±5%
R707	⚠	**ERD25FJ151**	Carbon, 1/4W, 150Ω, ±5%
R801		**ERD25TJ224**	Carbon, 1/4W, 220kΩ, ±5%
R802		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ±5%
R803		**ERD25TJ124**	Carbon, 1/4W, 120kΩ, ±5%
R804		**ERG1ANJ271**	Metal Oxida, 1W, 270Ω, ±5%
R805		**ERD25TJ153**	Carbon, 1/4W, 15kΩ, ±5%
R806		**ERD25FJ822**	Carbon, 1/4W, 8.2kΩ, ±5%
R807, 808		**ERD25TJ153**	Carbon, 1/4W, 15kΩ, ±5%
R809		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ±5%
R810		**ERD25FJ682**	Carbon, 1/4W, 6.8kΩ, ±5%
R811, 812	⚠	**ERD25FJ391**	Carbon, 1/4W, 390Ω, ±5%
R813, 814	⚠	**ERD25FJ272**	Carbon, 1/4W, 2.7kΩ, ±5%
R815, 816		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ±5%
R817		**ERD25TJ124**	Carbon, 1/4W, 120kΩ, ±5%
R818		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ±5%
R819		**ERD25TJ333**	Carbon, 1/4W, 33kΩ, ±5%
R851		**ERD25TJ333**	Carbon, 1/4W, 33kΩ, ±5%
R852		**ERG1ANJ221**	Metal Oxida, 1W, 220Ω, ±5%
R901, 902		**ERD25FJ331**	Carbon, 1/4W, 330Ω, ±5%
R903	⚠	**ERD50FJ820**	Carbon, 1/2W, 82Ω, ±5%
R904		**ERD25FJ331**	Carbon, 1/4W, 330Ω, ±5%
CAPACITORS			
C1, 2	⚠	ECKDKC103PE	Ceramic, 400VAC, 0.01μF, ±10%
C101, 102		ECCD1H101K	Ceramic, 50V, 100pF, ±10%
C103, 104		ECKD1H681KB	Ceramic, 50V, 680pF, ±10%
C105, 106		ECEA1CG330S	Electrolytic, 16V, 33μF
C107, 108		ECQM1H223JZ	Polyester, 50V, 0.022μF, ±5%
C109, 110		ECQM1H682JZ	Polyester, 50V, 0.0068μF, ±5%

Ref. No.		Part No.	Part Name & Desctiption
C111, 112	⚠	ECEA1HGN010S	Non-Polar Electrolytic, 50V, 1μF
C113, 114		ECEA1EG101S	Electrolytic, 25V, 100μF
C201, 202		ECQM1H563KZ	Polyester, 50V, 0.056μF, ±10%
C203, 204		ECKD1H331KB	Ceramic, 50V, 330pF, ±10%
C301, 302		ECEA1EKL3R3	Electrolytic, 25V, 3.3μF
C303, 304		ECKD1H221KB	Ceramic, 50V, 220pF, ±10%
C305, 306		ECEA1HKL010	Electrolytic, 50V, 1μF
C307, 308		ECKD1H102MD	Ceramic, 50V, 0.001μF, ±20%
C309, 310		ECCD1H060C	Ceramic, 50V, 6pF, ±0.25pF
C311, 312		ECEA1HG470S	Electrolytic, 50V, 47μF
C313, 314		ECKD1H681KB	Ceramic, 50V, 680pF, ±10%
C315, 316		ECKD1H681KB	Ceramic, 50V, 680pF, ±10%
C317, 318		ECCD1H060C	Ceramic, 50V, 6pF, ±0.25pF
C319, 320		ECEA1CKL100	Electrolytic, 16V, 10μF
C321, 322		ECCD1H390K	Ceramic, 50V, 39pF, ±10%
C323, 324		ECCD1H680K	Ceramic, 50V, 68pF, ±10%
C325, 326		ECCD1H330K	Ceramic, 50V, 33pF, ±10%
C401, 402		ECQM1H272KZ	Polyester, 50V, 0.0027μF, ±10%
C403, 404		ECQM1H223KZ	Polyester, 50V, 0.022μF, ±10%

Ref. No.		Part No.	Part Name & Description
C405, 406		ECCD1H221K	Ceramic, 50V, 220pF, ±10%
C407, 408		ECQM1H222KZ	Polyester, 50V, 0.0022μF, ±10%
C409, 410		ECQM1H183KZ	Polyester, 50V, 0.018μF, ±10%
C411, 412		ECQM1H104KZ	Polyester, 50V, 0.1μF, ±10%
C413, 414		ECEA1CKL100	Electrolytic, 16V, 10μF
C501, 502		ECKD1H103MD	Ceramic, 50V, 0.01μF, ±20%
C601, 602		ECES45R472Z	Electrolytic, 45V, 4700μF
C701		ECEA1EG470S	Electrolytic, 25V, 47μF
C702		ECEA1HG010S	Electrolytic, 50V, 1μF
C703		ECE1HG100S	Electrolytic, 50V, 10μF
C801		ECEA1CG330S	Electrolytic, 16V, 33μF
C802		ECEA1HKL010	Electrolytic, 50V, 1μF
C803		ECEA2AG100S	Electrolytic, 100V, 10μF
C804		ECEA1HKL010	Electrolytic, 50V, 1μF
C805		ECKD1H103MD	Ceramic, 50V, 0.01μF ±20%
C806	⚠	ECEA1CGN101S	Non-Polar Electrolytic, 16V, 100μF
C807, 808	⚠	ECEA1HGN3R3S	Non-Polar Electrolytic, 50V, 3.3μF
C901		ECEA0JG102S	Electrolytic, 6.3V, 1000μF

■ REPLACEMENT PARTS LIST ·····Cabinet and Chassis Parts

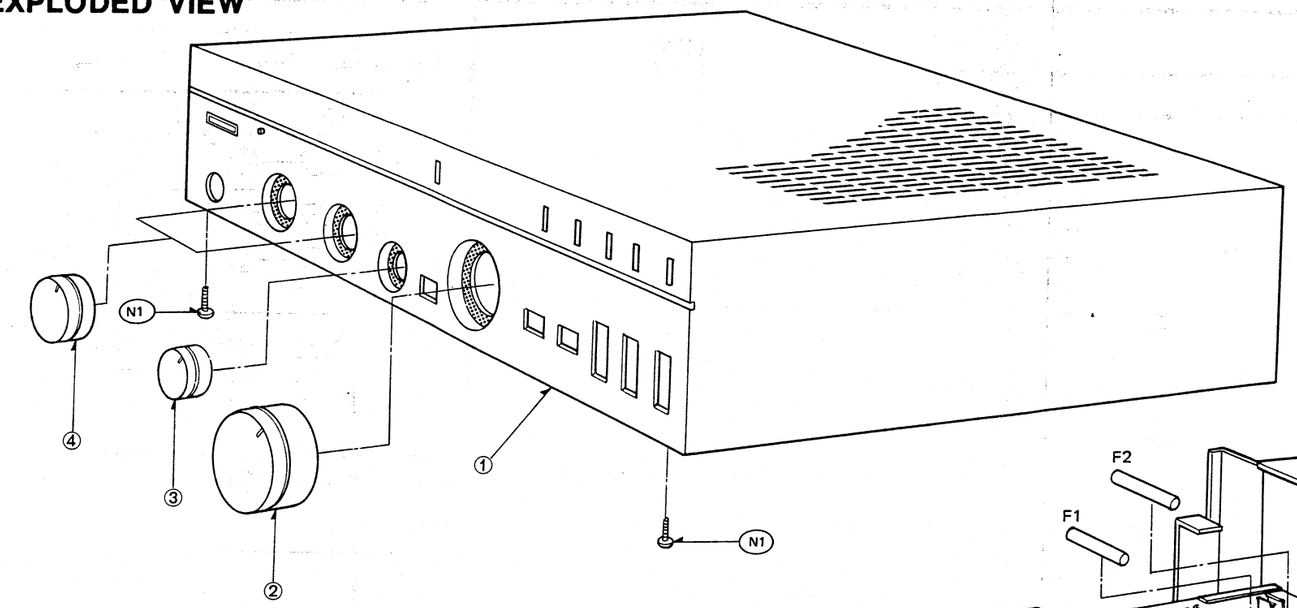
Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
3. [K] -marked parts are used for black only, while ○ marked parts are for silver type only.
4. Parts other than [K] - and ○-marked are used for both black and silver types.
5. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

Black type model No.: SU-C04 (K)

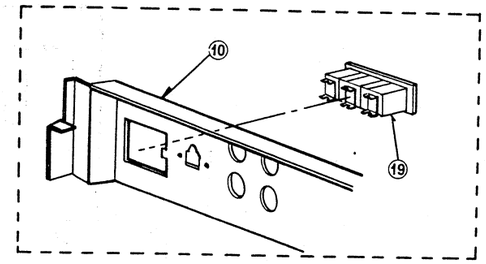
Ref. No.		Part No.	Part Name & Description
CABINET and CHASSIS PARTS			
1	○	SYW521	Panel, Front Ass'y (Silver)
1	[K]	SYW479	Panel, Front Ass'y (Black)
2		SBN1053	Knob, Volume Control
3		SBN1055	Knob, Balance
4		SBN1057	Knob, Bass/Treble Control
5		SBC315–1	Button, Input Selector
6		SBC399	Button, Loundness and Tape Monitor
7		XCJS6P21E–A	Jack, Head Phone
8		SFJ3049N	Terminal Board, Input
9		SJF4431	Terminal Board, Speakers
10 [XA]		SGP2750–1A	Rear Panel
10 [EX, EK, EF, EH, EB]		SGP2750–2A	Rear Panel
10 [XL]		SGP2750–3A	Rear Panel
11		SJF4101	Terminal, Ground
12 [XL]	⚠	**QFC1207MA**	AC Cord
12 [EF, EH, EB, EX]	⚠	**SJA88**	AC Cord
12 [EK]	⚠	**QFC1205M**	AC Cord
12 [XA]	⚠	SJA111	AC Cord
13 [EF, EH, EB, EX, XA]		SHR127	Bushing, AC Cord
13 [EK]		SHR129	Bushing, AC Cord
13 [XL]		SHR131	Bushing, AC Cord
14		SUV453	Cover, Voltage Adjuster Switch
15		SKL261	Foot, Set
16		SKU9310	Buttom Board
17		SJS5627	Connector, 6 pin
17		SJS5335	Connector, 3 pin
17		SJS5429	Connector, 4 pin
17		SJS5527	Connector, 5 pin
18		SJT347	Fuse Clamp
19		SJS9221	AC Outlets
[EX]		SGT24750	Name Plate
[EK, EF, EH, EB]		SGT24770	Name Plate
[XA, XL]		SGT24790	Name Plate

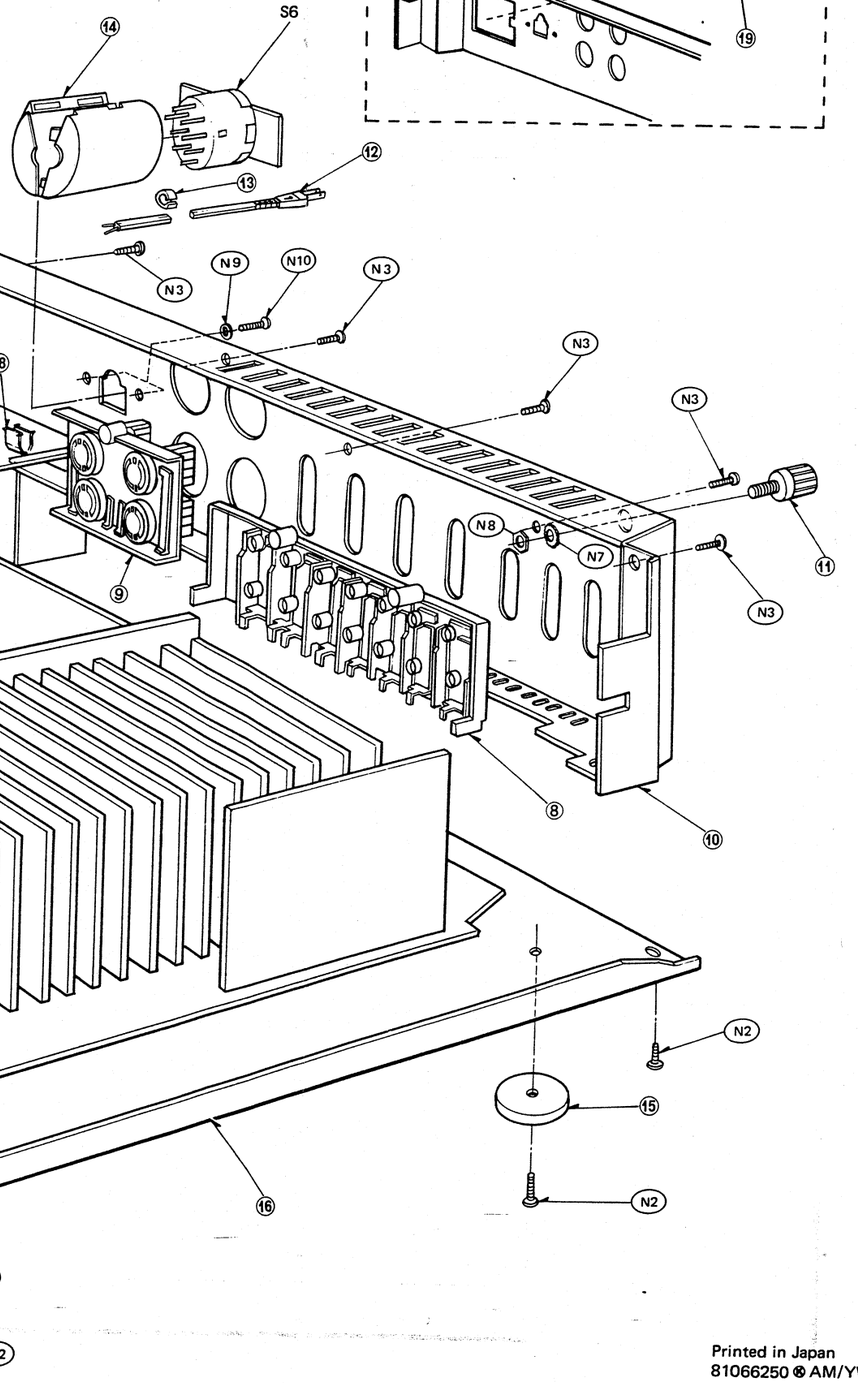
Ref. No.		Part No.	Part Name & Description
SCREWS, WASHERS and NUTS			
N1		XTB3+8GFZ	Screw, Tapping, ⊕ 3x8
N2		**XTB3+8BFN**	Screw, Tapping, ⊕ 3x8
N3		**XTB3+8BFZ**	Screw, Tapping, ⊕ 3x8
N4		SNE4021	Nut
N5		SNE59–1	Washer
N6		**XNS12**	Washer
N7		**XWC6B**	Washer
N8		XNGR6	Washer
N9		**XWA3BFZ**	Washer
N10		**XSN3+6BVS**	Screw, Tapping, ⊕ 3x6
ACCESSORIES			
A1 [EX, EF, EH, EB]		SQF10819	Instructions Book
A1 [EK, XL]		SQF10821–1	Instructions Book
A1 [XA]		SQF10823	Instructions Book
A2 [XA]		SJP5215	Plug Adapter, AC Power
A3 [XA]		SJP5213–1	Plug Adapter, AC Power
PACKING PARTS			
P1 [EX, EK, XA,EH,EB]		SPG3213	Carton Box
P1 [EF]		SPG3211	Carton Box
P1 [XL]		SPG3215	Carton Box
P2		SPS3227	Pad, Left
P2 [XL]		SPS3227–1	Pad, Left
P3		SPS3229	Pad, Right
P3 [XL]		SPS3229–1	Pad, Right
P4		SPP691	Polyethylene Bag

■ EXPLODED VIEW

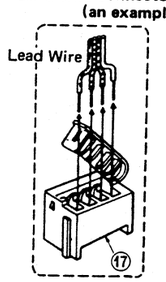


The product for [XA] area is equipped with AC outlet.





Lead wire connector (an example)



Areas

[EX] is available in Scandinavia.
[EK] is available in United Kingdom.
[XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
[XL] is available in Australia.
[EF] is available in France.
[EH] is available in Holland.
[EB] is available in Belgium.

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